

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-2 (Cancelled).

3. (Currently Amended). ~~The method as claimed in claim 2,~~ A method of processing original-quality MPEG coded video to produce reduced-quality MPEG coded video for trick mode operation, the MPEG coded video including a set of non-zero AC discrete cosine transform (DCT) coefficients for 8x8 blocks in I-frames of the MPEG coded video, said method including the steps of removing non-zero AC DCT coefficients from the 8x8 blocks of I-frames of the MPEG coded video to produce I-frames of reduced-quality MPEG coded video, and inserting freeze frames in the reduced-quality MPEG coded video,

which further includes ingesting the original-quality MPEG coded video into a file server and storing the original-quality MPEG coded video in a main file, producing the I-frames of reduced-quality MPEG coded video from the original-quality MPEG coded video ingested into the file server, and storing the I-frames of reduced-quality MPEG video in at least one trick mode file in the file server,

wherein the trick mode file shares a volume with the main file, and the volume includes an index linking the I frames of reduced-quality MPEG coded video to corresponding I frames in the original-quality MPEG coded video.

4. (Original) The method as claimed in claim 3, which includes permitting clients to access the main file but not the trick mode file via read and write file access commands, and accessing the trick mode file in response to client requests for trick mode operations during streaming of the original-quality MPEG coded video from the main file.

Claims 5-9 (Cancelled).

10. (Currently amended) ~~The method as claimed in claim 9,~~ A method of processing original-quality MPEG coded video to produce reduced-quality MPEG coded video for trick mode operation, the MPEG coded video including a set of non-zero AC discrete cosine transform (DCT) coefficients for 8x8 blocks in I-frames of the MPEG coded video, said method including the steps of removing non-zero AC DCT coefficients from the 8x8 blocks of I-frames of the MPEG coded video to produce I-frames of reduced-quality MPEG coded video, and inserting freeze frames in the reduced-quality MPEG coded video,

wherein the original-quality MPEG coded video is included in an original-quality MPEG transport stream, and the method includes producing an MPEG trick-mode

transport stream including the reduced-quality MPEG coded video and the freeze frames inserted into the reduced-quality MPEG coded video,

which further includes extracting from the original-quality MPEG transport stream an audio presentation unit (APU) for each I frame in the reduced-quality MPEG coded video, the audio presentation unit having, in the original-quality MPEG transport stream, an audio presentation time that first begins in a video presentation time of a corresponding I frame in the original-quality MPEG transport stream, and inserting the audio presentation unit into the reduced-quality MPEG transport stream so that, in the reduced-quality MPEG transport stream, the audio presentation unit has an audio presentation time that first begins in a video presentation time of said each I frame.

11. (Original) The method as claimed in claim 10, wherein an APU pointer specifies audio presentation units that are transferred from the original-quality MPEG transport stream to the reduced-quality MPEG transport stream, and the APU pointer is changed when a current APU ends by either incrementing the APU pointer or advancing the APU pointer to specify said audio presentation unit for said each I frame in the reduced-quality MPEG coded video.

Claims 12-16 (Cancelled).

17. (Currently amended) The data storage device as claimed in claim 12, A data storage device containing a main file, a fast-forward file and a fast-reverse file, the main file containing data of an MPEG transport stream including groups of pictures (GOPs), each GOP including an original-quality I-frame and a plurality of P or B-frames, the fast-forward file containing data of a fast-forward MPEG transport stream including GOPs, each GOP in the fast-forward file corresponding to a GOP in the main file and including at least one reduced-quality I frame corresponding to the original-quality I frame in the corresponding GOP of the main file, the fast-reverse file containing data of a fast-reverse MPEG transport stream including GOPs, each GOP in the fast-reverse file corresponding to a GOP in the main file and including at least one reduced-quality I-frame corresponding to the original-quality I frame in the corresponding GOP of the main file, wherein a reading of the main file produces an MPEG transport stream for an audio-visual presentation at a normal rate, a reading of the fast-forward file produces an MPEG transport stream of the audio-visual presentation in a forward direction at a fast rate, and a reading of the fast-reverse file produces an MPEG transport stream of the audio-visual presentation in a reverse direction at a fast rate,

wherein the fast-forward file and the fast-reverse file share a volume with the main file, and the volume includes an index linking the GOPs of the fast-forward file and the fast-reverse file to corresponding GOPs of the main file.

18. (Original) The data storage device as claimed in claim 17, wherein the volume further includes an inode area and a meta-data area.

Claims 19-22 (Cancelled).

23. (Currently amended) ~~The file server as claimed in claim 22,~~ A file server including at least one data storage device, the data storage device containing a main file, a fast-forward file and a fast-reverse file, the main file containing data of an MPEG transport stream including groups of pictures (GOPs), each GOP including an original-quality I-frame and a plurality of P or B-frames, the fast-forward file containing data of a fast-forward MPEG transport stream including GOPs, each GOP in the fast-forward file corresponding to a GOP in the main file and including at least one reduced-quality I frame corresponding to the original-quality I frame in the corresponding GOP of the main file, the fast-reverse file containing data of a fast-reverse MPEG transport stream including GOPs, each GOP in the fast-reverse file corresponding to a GOP in the main file and including at least one reduced-quality I-frame corresponding to the original-quality I frame in the corresponding GOP of the main file,

wherein the file server is programmed to respond to a client request for an audio-visual presentation at a normal rate by reading the main file and streaming MPEG data from the main file to the client,

wherein the file server is programmed to respond to a client request for the audio-visual presentation in a forward direction at a fast rate by reading the fast-forward file and streaming MPEG data from the fast-forward file to the client,

wherein the file server is programmed to respond to a client request for the audio-visual presentation in a reverse order at a fast rate by reading the fast-reverse file and streaming MPEG data from the fast-reverse file to the client,

wherein the file server is programmed to allocate a volume for the main file, the fast-forward file, and the fast-reverse file when the main file is ingested into the file server, and

wherein the volume further includes an index linking the GOPs of the fast-forward file and the fast-reverse file to corresponding GOPs of the main file.

24. (Original) The file server as claimed in claim 22, wherein the volume further includes an inode area and a meta-data area.

Claims 25-26 (Cancelled).